U.S. Department of Energy
Office of Civilian Radioactive Waste Management

www.ocrwm.doe.gov

Status of the DOE/OCRWM Program

Presented to:
NARUC Committee Winter Meeting
Washington, D.C.

Presented by:
Paul M. Golan
Principal Deputy Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy

February 13, 2006

Program Update

- Principles
- Where We Are Going
- Program FY07 Objectives
- FY07 Budget Request Summary
- Canister Approach
- FY07 Yucca Mountain Activities
- FY07 Transportation Activities
- FY07 Program Management Activities
- DOE Legislative Proposal
- Program Reorganization
- GNEP and Yucca Mountain
- Summary

Principles

- Yucca Mountain is the solution approved by the President & Congress
- Yucca Mountain is still needed under any fuel cycle scenario
- Proceeding on base case to deal with current and planned spent nuclear fuel and high-level waste inventory
- Not in a position to discuss license application schedule today; need to evaluate clean/canister design and fully factor in final EPA Radiation Protection Standard
- FY 2007 budget supports Program on four broad and important fronts
- Release of Technical Impacts Report
- Significant focus on improving ***organizational quality***

Where We Are Going

- Strong, defensible license application based on simplified design, licensing, and operations using a clean-canistered approach
- Scientific and technical work that is traceable, transparent, and in compliance with quality assurance requirements
- Sandia National Laboratories to coordinate and manage science work
- Use of independent, university-based reviews of work to ensure quality products
- Culture that is ready to assume responsibilities inherent in nuclear operations

Program FY07 Objectives

- Develop a license application for submission to the NRC based on a safer and simpler approach to handling spent nuclear fuel and operating the repository known as the *clean-canistered* approach
- Develop a nuclear safety culture of the highest standards that demonstrates we have earned the trust required to conduct nuclear operations
- Develop the transportation infrastructure through necessary long-lead procurement actions, and continued rail line development
- Improve Yucca Mountain site infrastructure to ensure worker, regulator, and visitor safety

FY07 Budget Request Summary (millions)

	FY 2006 Approp	FY 2007 Request
Yucca Mountain	$ 305.9	$ 355.4
Transportation	19.9	67.7
Prog Mgmt & Integration/Prog Direction	119.7	121.4
Integrated Spent Fuel Recycling Facilities	49.5	0.0
TOTAL PROGRAM	495.0	544.5
Nuclear Waste Fund	99.0	156.4
Integrated Spent Fuel Recycling Facilities	49.5	0.0
Defense Nuclear Waste Disposal	346.5	388.1

Canister Approach - Program Redirection

- Canister for transportation, aging, and disposal (TAD) minimizes handling of assemblies and limits need for multiple complex surface facilities
- Canister provides simplification in repository design, licensing, construction, and operation
- Spent nuclear fuel will be delivered to the repository primarily in canisters for spent fuel aging and emplacement under ground

FY07 Yucca Mountain Key Activities

- Continue design of clean-canistered based repository facilities
- Work with industry to complete the preliminary design for the TAD standard canister
- Conduct additional pre-closure and post-closure safety analysis work to support the design basis
- Update license application as clean-canistered modifications mature to reflect additional analytical and design work
- Continue upgrades to communication, emergency response, and workplace infrastructure

FY07 Transportation Key Activities

- Issue Final Nevada Rail Alignment EIS and ROD
- Develop impact mitigation plans along preferred alignment
- Continue the procurement process for truck and rail casks and associated specialized equipment and design; develop prototype of the rail car for security escorts

- Establish pilot emergency preparedness grant programs as part of implementation of Section 180(c) of Nuclear Waste Policy Act

FY07 Program Management & Integration Activities

- Utilize Sandia National Laboratories to manage and integrate scientific studies for the Program

- Develop a nuclear safety culture, including improving design configuration control, effective issue resolution processes, and encouraging employees to identify issues

- Continue to implement project management improvements, including clear requirements definition and maintenance, and project control through earned value management system

Global Nuclear Energy Partnership and Yucca Mountain

- Yucca Mountain is still needed under any fuel cycle scenario
- We are proceeding with our base case to deal with current and planned inventory of spent nuclear fuel and high-level waste
- If the technology is proven and developed, the Global Nuclear Energy Partnership (GNEP) could provide improvements to spent fuel disposal at a repository by:
  - significantly reducing the volume of waste
  - enhancing thermal management by reducing waste form heat load
  - reducing the amount of long-lived radionuclides requiring disposal

Summary

- Entering an important period for the nuclear industry and for the disposition of nuclear waste in the United States
- The Department is committed to the development of Yucca Mountain as a geologic repository
- GNEP has the potential to improve Yucca Mountain long-term performance